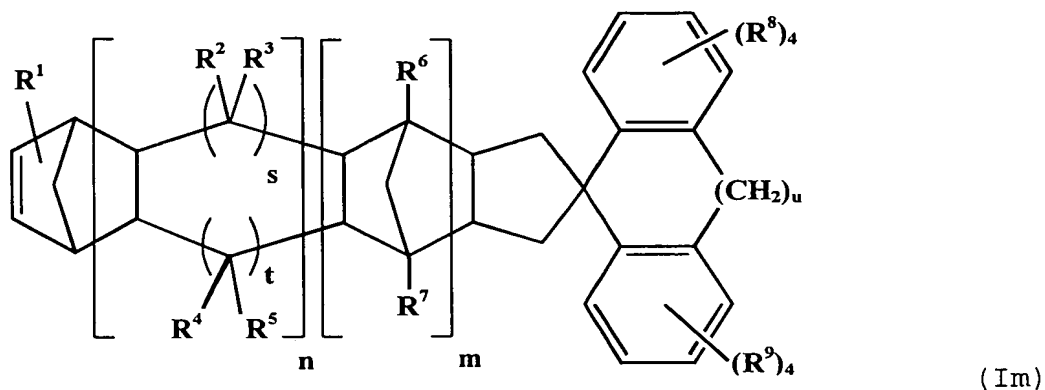


CLAIMS

1. A norbornene derivative represented by the following formula (Im):



5 wherein R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an
 10 oxygen atom, a nitrogen atom, a sulfur atom or a silicon atom, and a polar group,

s , t and u are each independently an integer of 0 to 3, and

m and n are each independently an integer of 0 to 2.

15

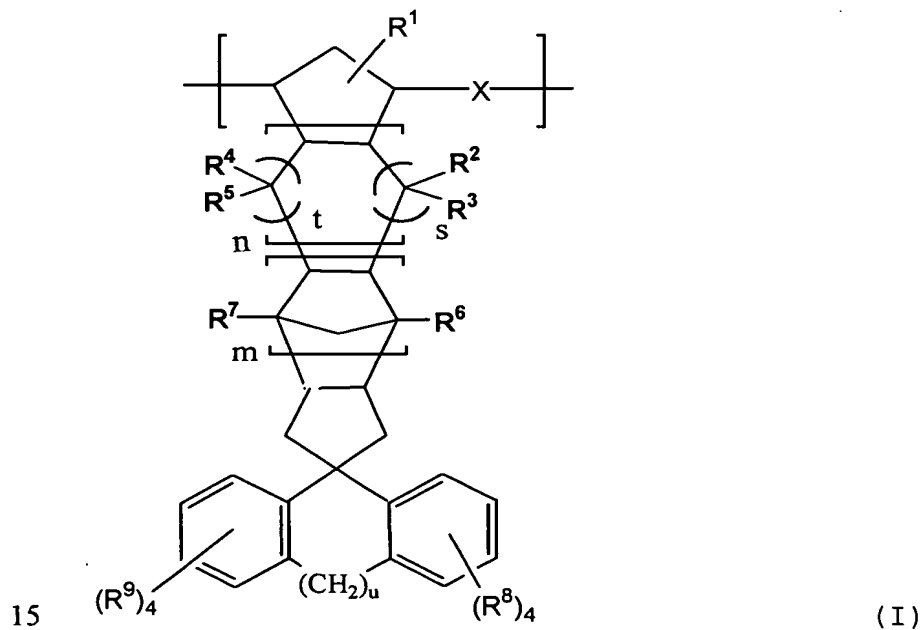
2. The norbornene derivative as claimed in claim 1, wherein in the formula (Im), n is 0 and m is 0 or 1.

3. The norbornene derivative as claimed in claim 1 or 2, wherein in the formula (Im), u is 0 or 1.

4. The norbornene derivative as claimed in claim 1, wherein in the formula (Im), n is 1 or 2, s and t are each 1, and u is 0 or 1.

5. The norbornene derivative as claimed in any one of claims 1 to 4, wherein in the formula (Im), 3 or more of R^8 and 3 or more of R^9 are each a hydrogen atom.

6. A norbornene ring-opened (co)polymer having structural units (I) represented by the following formula (I):



wherein m and n are each independently an integer of 0 to 2,

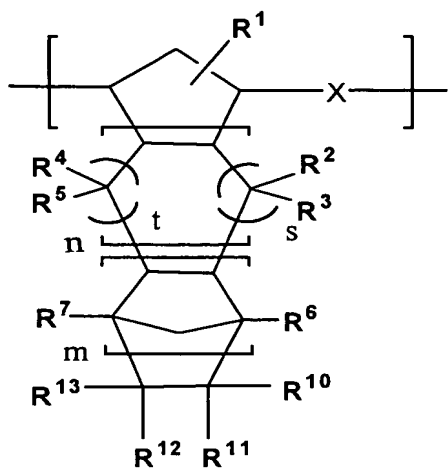
X is a group represented by the formula $-\text{CH}=\text{CH}-$ or a group represented by the formula $-\text{CH}_2\text{CH}_2-$,

5 $\text{R}^1, \text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5, \text{R}^6, \text{R}^7, \text{R}^8$ and R^9 are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an
10 oxygen atom, a nitrogen atom, a sulfur atom or a silicon atom, and a polar group, and

s, t and u are each independently an integer of 0 to 3.

15 7. The norbornene ring-opened (co)polymer as claimed in claim 6, wherein the structural units (I) are contained in amounts of not less than 2% by mol of all structural units.

20 8. The norbornene ring-opened (co)polymer as claimed in claim 6 or 7, which further has structural units (II) represented by the following formula (II):



(II)

wherein m and n are each independently an integer of 0 to 2,

X is a group represented by the formula $-\text{CH}=\text{CH}-$ or a group represented by the formula $-\text{CH}_2\text{CH}_2-$,

R^1 , R^2 , R^3 , R^4 , R^5 , R^6 and R^7 are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an oxygen atom, a nitrogen atom, a sulfur atom or a silicon atom, and a polar group,

R^{10} , R^{11} , R^{12} and R^{13} are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an oxygen atom, a nitrogen atom, a

sulfur atom or a silicon atom, and a polar group, they may be bonded to each other to form a monocyclic or polycyclic group which may have a hetero atom, and R^{10} and R^{11} , or R^{12} and R^{13} may be united to form a divalent hydrocarbon group, and

s and t are each independently an integer of 0 to 3.

9. The norbornene ring-opened (co)polymer as claimed in claim 8, wherein the structural units (II) are contained in amounts of not more than 98% by mol of all structural units.

10. The norbornene ring-opened (co)polymer as claimed in any one of claims 6 to 9, wherein the total amount of the structural units (I) and the structural units (II) is not less than 5% by mol of all structural units.

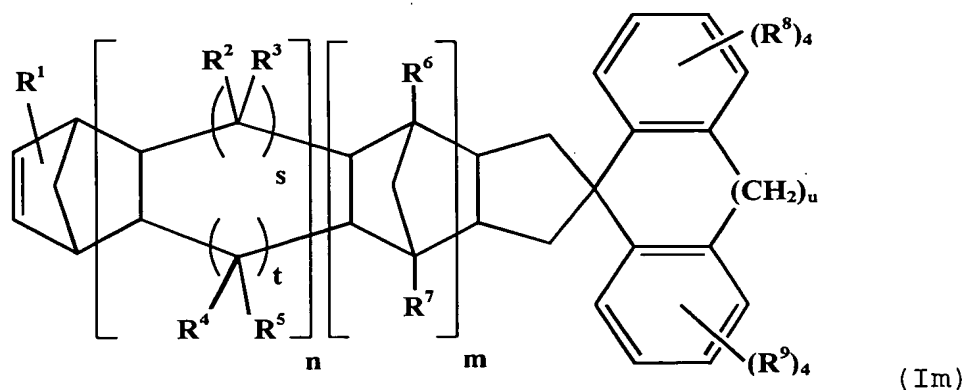
11. The norbornene ring-opened (co)polymer as claimed in any one of claims 6 to 10, wherein X in an amount of not less than 90% by mol of the total amount of X in the structural units (I) and the structural units (II) is a group represented by $-\text{CH}_2\text{CH}_2-$.

12. The norbornene ring-opened (co)polymer as claimed in any one of claims 6 to 11, wherein the structural units (I) are structural units of the formula (I) in which m is 0, n is 0, and u is 0.

5

13. A process for preparing a norbornene ring-opened (co)polymer, comprising ring-opening (co)polymerizing a norbornene monomer (Im) represented by the following formula (Im) optionally together with a norbornene monomer (IIIm) represented by the following formula (IIIm);

10



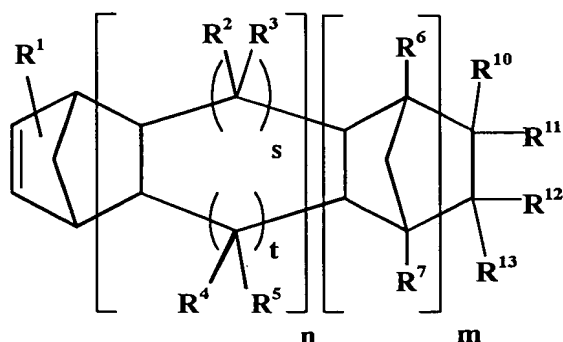
wherein m and n are each independently an integer of 0 to 2,

15

R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an

oxygen atom, a nitrogen atom, a sulfur atom or a silicon atom, and a polar group, and

s, t and u are each independently an integer of 0 to 3;



(IIm)

wherein m and n are each independently an integer of 0 to 2,

R¹, R², R³, R⁴, R⁵, R⁶ and R⁷ are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an oxygen atom, a nitrogen atom, a sulfur atom or a silicon atom, and a polar group,

15 R^{10} , R^{11} , R^{12} and R^{13} are each independently an atom or a group selected from the group consisting of a hydrogen atom, a halogen atom, a substituted or unsubstituted hydrocarbon group of 1 to 30 carbon atoms which may have a linkage containing an oxygen atom, a nitrogen atom, a

sulfur atom or a silicon atom, and a polar group, they may be bonded to each other to form a monocyclic or polycyclic group which may have a hetero atom, and R^{10} and R^{11} , or R^{12} and R^{13} may be united to form a divalent

5 hydrocarbon group, and

s and t are each independently an integer of 0 to 3.

14. The process for preparing a norbornene ring-opened (co)polymer as claimed in claim 13, comprising
10 ring-opening (co)polymerizing the norbornene monomer (Im) represented by the formula (Im) optionally together with the norbornene monomer (IIIm) represented by the formula (IIIm) and then hydrogenating the resulting (co)polymer.